

debated; especially in the device contained a dead space may harbor growing bacterial contaminants.

**Methods:** The study was carried out during a period of routine bloodstream infection surveillance in a tertiary referral hospital which the hematology/oncology pediatric ward introduced the needleless connector (Small bore T-port extension set, B. Braun, Taiwan). In general, patients who develop fever, at least one set blood culture obtained from peripheral venipuncture, but for avoid multiple painful needle sticks in pediatric patients or for ruled out catheter related, one or all blood culture may be obtained from the intravascular catheter.

**Results:** There were remarkable increased blood culture positive events, from July 2013 and especially in October 2013. The odds ratios for the time period in which the suspected connector was introduced compared with baseline (March to June, 2013) was 2.14 (95%CI, 1.07-4.27). After stop using the connector, and overall the blood culture positive rate dramatic decreased from 12.99 % (July to October, 2013) to 2.91 % (December 2013 to February 2014) ( $p=0.003$ ).

**Conclusions:** The connector contained a dead space, may be contaminated after frequent accessed, even the staffs disinfected the hub. When hospitals introduced novel needleless equipment, they must consider these issues and adequate educated all staffs to reduce these risks.

#### PS 2-388

#### SCABIES INTERVENTION EXPERIENCE IN A NURSING HOME IN CENTRAL OF TAIWAN

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**Purpose:** This nursing home is a hospital subsidiary organization which established in January, 2014. The number of residents over 55 beds, 88% bed occupancy rate after opening in May, 2014. Scabies is an intimate contagious skin disease, often spread in hospitals, long-term care institution. This nursing home found two residents diagnosed with scabies during Family Medicine mobile medical service on Jun, 2014. Nursing home immediately develops and implements the infection control related intervention, a comprehensive review for this event, to combat scabies infection and maintain resident safety to improve the quality of life.

**Methods:** Analysis of the main problems is lack of staff awareness of scabies, did not set the effective screening assessment standards and scabies prevention of infection.

**Improvement intervention:** 1. containment survey and environmental disinfection. 2. Organized "scabies care" education and training. 3. New resident skin examination mechanism. 4. Revision of suspected or confirmed scabies treatment process and prevent infection procedure. After the incident, the development of two improvement programs: 1. a survey whether the patient is bedridden or hospitalized long-term residential, whether there scabies infection, infection risk factors, should be first administered Jaline Lotion for prevention. 2. If the new residents have skin folds view there rash, isolation first, and then to be diagnosed with skin by mobile medicine service in order to avoid the spread of scabies occur.

**Results:** According to the aforementioned method implementation nursing home residents or staff no scabies infection until October, 2014.

**Conclusions:** Nursing homes are densely populated institutions, Staff should be able to early detection of infection cases in the organization, immediately infection control intervention to ensure residents health, prevent interaction infection

#### PS 2-389

#### HEPATITIS E INVESTIGATION IN BANGKOK HOSPITAL

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**Purpose:** On June 7th, 2014 2 health care staff were hospitalized with acute hepatitis infection reported by ward staff. The first case presented of fatigue, nausea and acute jaundice was onset on June 4th, 2014. The second case presented of acute jaundice was admitted on June 7th, 2014. Blood collection for

laboratory confirmed Immunoglobulin M (IgM) antibody to hepatitis E virus positive. Hepatitis infection case investigation was done by infection control nurse and reported to Infection Control Committee (ICC) to review epidemiology and discussion. The hepatitis E virus is transmitted through the fecal-oral route due to fecal contamination of drinking water. In epidemiology of Hepatitis E virus (HEV), humans are the natural host for HEV. Outbreaks often manifest as waterborne epidemics, but sporadic cases and outbreaks are not related to water contamination and our hospital has a drinking water standard. As ICC discussed although water contamination was not possible source, it is needed to identify source of infection for staff and patient safety.

**Methods:**

1. Confirmed and investigated cases.
2. Reviewed drinking water quality result.
3. Did walking round in food services area by infection control nurse.
4. Collected blood for Immunoglobulin M (IgM) antibody to hepatitis E virus in operation of food and beverage staff.

**Results:** Blood collection for Immunoglobulin M (IgM) antibody to hepatitis E virus in 152 in operation of food and beverage staff were done. Laboratory results confirmed 3 cases of Immunoglobulin M (IgM) antibody to hepatitis E virus positive but there are no signs and symptoms of hepatitis infection. They were rotated to another job which does not contact directly to food and beverage handling.

**Conclusions:** Hepatitis E usually resolves on its own without any treatment. There is no specific antiviral therapy for hepatitis E. Physicians may offer supportive therapy. Patients are typically advised to rest, get adequate nutrition and fluids, and avoid alcohol. Food services manager have to ensure that food employees are well hygiene care, well-trained on reporting self-symptoms and self-diagnosis of foodborne illness.

#### PS 2-390

#### PERSISTENT COLONIZATION OF CLONAL *PSEUDOMONAS AERUGINOSA* IN ENDOSCOPIC LUMEN DESPITE REPEATING APPROPRIATE CLEANING AND DISINFECTION

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**Background:** *P. aeruginosa* was frequently isolated from endoscopic sampling cultures. Appropriate procedures according to infection control guidelines were recommended to be implemented in cleaning and disinfection of endoscopy related instruments.

**Materials and methods:** The process for cleaning and disinfection of endoscopy was performed according to CDC and the manufactory's guides with water, detergent, and ortho-phthalaldehyde (OPA). Environmental cleaning was done with 500 ppm sodium hypochloride after each endoscopy. Then 20 ml of sterile water was flushed into internal lumen of endoscope, and was collected and plated on blood agar plates. Microorganisms were identified according to biochemistry results and were confirmed by Vitek-II automated system. The microorganism was secondly cultured and digested with appropriate restriction enzyme, and pulse-field gel electrophoresis (PFGE) was done with Bio-Rad DR-III system. Isolates with identical PFGE profiles were designated the same type.

**Results:** A total of 18 *Pseudomonas* species (14 *P. aeruginosa*, 3 *P. putida*, and 1 *P. rettgeri*) were serial isolated and identified after standard cleaning and disinfection procedures of endoscopy from April, 2011 to February, 2013). There were 5 *P. aeruginosa* recovered from one endoscope (TJF-2) for endoscopic retrograde cholangiopancreatography (ERCP). Ten PFGE patterns were identified in 18 pseudomonas, among which 9 *P. aeruginosa* including 5 from TJF-2 belonged to the same PFGE pattern. The contaminated TJF-2 endoscope was no longer used because persistent isolation of *P. aeruginosa* with same PFGE profile despite adequate cleaning and disinfection. No pseudomonas including *P. aeruginosa* was recovered after discarding contaminated TJF-2.

**Conclusions:** *P. aeruginosa* may cause persistent colonization and subsequent contamination of endoscopes. Fingerprinting such as PFGE provides a practical method to identify clusters of infection and instrumental contamination.